

Meeting Notes:

Recorded by: Allie Phillips and Mike Elliott

NOTE: Copies of the meeting notes and presentation slides are available on the MassDEP C&D Subcommittee webpage. The MassDEP C&D Subcommittee webpage can be found at the following link: <http://www.mass.gov/eea/agencies/massdep/news/advisory-committees/cd-subcommittee.html>. Comments can be submitted via email to Mike Elliott at michael.elliott@mass.gov.

The following agenda items were covered during the meeting:

1) Welcome/Introductions

- a) MassDEP welcomed participants in the room and on the webinar.
 - i) Participants in conference room: 20 (as recorded on meeting sign-in sheets)
 - ii) Participants on webinar: 16 (as recorded on webinar attendee report)
 - iii) Participants reflected a cross-section of stakeholders representing: C&D Processors and Transfer Stations; Waste Haulers; Recycling Processors; Recycling/Re-use End-Markets; Construction Contractors, Recycling Equipment Suppliers; Environmental Advocacy NGO, Green Consultants, Business/Institution Recycling/Re-use Resource Organization, and State Officials

2) SWMP/C&D Action Plan Development

MassDEP reminded participants that one of the primary goals of this year's subcommittee meetings is to continue advancing development of the next 10-year Solid Waste Master Plan (SWMP) for 2020 to 2030. The SWMP, which includes the C&D Action Plan, establishes high level policy goals, objectives and strategies to guide solid waste management in Massachusetts. MassDEP is planning to formally issue a draft of the SWMP for public comment in the 4th quarter of 2019. After completing the public comment process, the final version of the SWMP will be published in late 2020.

- Based on the "Draft Analysis of 2030 Waste Reduction Potential" (which can be found at the following link: <https://www.mass.gov/doc/draft-analysis-of-2030-waste-reduction-potential>), MassDEP is proposing to establish a waste reduction goal for C&D Materials of 250,000 tons annually by 2030 compared to a 2017 baseline. This number would include C&D Materials managed through both MSW and C&D Handling Facilities.
- To help capture the entire universe of C&D materials management, MassDEP will be exploring ways to track materials that are not currently reported in the solid waste annual reports, for example:
 - Source separated materials at construction jobsites
 - C&D material shipped to out-of-state processors
 - C&D materials donated/reused
 - Other outlets?

3) **Preliminary CY2018 C&D Facility Annual Report Summary Data**

MassDEP presented preliminary summary data as compiled from the CY2018 C&D annual reports, which included:

- Preliminary CY2018 C&D Annual Report Summary Data
 - Total material accepted: 2,119,225 tons
 - Inbound Mixed C&D Waste: 1,268,150 tons
 - Transferred for further processing: 378,458 tons
 - Recycled/Reused: 241,335 tons
 - Landfill Dependent Use Application: 223,031 tons
 - Disposed at landfill/combustion: 967,711 tons
- Trend of Inbound Materials Accepted Over Time
 - Over past 10 years
 - 90% increase in total inbound material
 - 32% increase of Inbound Category 1 mixed C&D waste
 - 400% increase of Inbound C&D Residuals (CY2018: 280,329 tons)
 - 2500% increase of Inbound Category 3 Bulky Waste (CY2018: 503,041 tons)
- C&D Annual Recycling Rate Trend Chart
 - CY2018: 25% on average across all C&D Handling Facilities
 - Reflects a declining trend since CY2013
- CY2018 Wood Product Recovered
 - Total of 164,912 tons recovered
 - Particle board 71,164 tons (43%)
 - Biomass fuel: 30,816 tons (19%)
 - Bulking agent: 10,735 tons (6.5%)
 - 28% of Landfill Dependent Use Materials (C&D Residuals used as ADC and Roadbase): 52,157 tons (32%)
- CY2018 Other Processed Materials Recovered
 - Clean gypsum wallboard: 1,209 tons
 - Asphalt roofing shingles: 3,024 tons

4) **Gypsum Wallboard Recycling Discussion**

The gypsum wallboard recycling discussion included the following themes:

- Overview/Framework: Interest in wallboard recycling is growing regionally across a broad spectrum of industry stakeholders (e.g. construction contractors, owners/developers, wallboard manufacturers, gypsum recyclers, C&D processors, NGO standards organizations, State/Province/Local regulatory agencies, etc.)
- Product Stewardship: One commenter offered an interesting comparison: he suggested that gypsum wallboard is to C&D processing facilities what plastic bags are to MRF facilities. It is undesirable in the process; difficult to manage once introduced in the a mixed C&D waste load; complicates managing C&D fines and residuals; creates a public nuisance when improperly disposed; and costly to manage. Given the downstream impacts of managing this product over its life-cycle, the commenter suggests that gypsum wallboard is the perfect candidate for a product stewardship initiative. Without such a subsidy, borne by the manufacturers, the market dynamics make it difficult to justify the infrastructure and operating expense necessary to support diversion out of the waste stream.

- C&D Process Handling: If gypsum arrives in a mixed C&D waste load, it is more than likely unrecoverable. To enhance the efficiency of collection and transportation, processors can serve as a point of consolidation. Some already serve that role.
- Jobsite Handling: The processor that recovers the most gypsum wallboard for recycling expressed a preference for source separated loads, preferably packaged in Bagsters for ease of handling and protection from the elements while sitting in the container.
- Economics: The cost of gypsum FOB the mine is \$10/ton. The cost of synthetic gypsum FOB the coal-burning power plant (often done under private contract) is usually around \$5/ton. One of the gypsum recyclers stated that wallboard manufacturers are not willing to pay a premium for recycled gypsum feedstock, in fact, they normally expect a discount.
- End market outlets and supply of raw material: These two are interrelated. It is the age-old dilemma of which comes first. Without viable end-markets, there is no incentive to recover and process raw material, and without a reliable source of raw materials, there is no incentive to establish an end-market. One gypsum recycler opined that the quantities of clean wallboard currently recovered by Massachusetts C&D processors (ca. 1200 tons per year) cannot support a sustainable market. Massachusetts/New England region needs to both secure a steady volume of recovered material and secure confirmed end-markets to support a sustainable business model.
- Enforcement: MassDEP reiterated its existing waste disposal ban on clean gypsum wallboard. Any person who brings waste loads with banned materials to a transfer station or handling facility that is not operationally capable to segregate the banned materials is in violation of the waste ban regulation. MassDEP will enforce against generators, haulers and handling facilities that violate the waste ban regulations.

At the conclusion of the discussion, representatives of three gypsum wallboard recyclers provided a brief introduction and description of the services they provide:

- New West Gypsum Recycling (<https://www.nwgyypsum.com/>), presented by John Pahulje. Existing operation since 1985 with processing facilities in the northwest US, Canada and Europe. Looking to expand into the New England region.
- USA Gypsum (<https://www.usagypsum.com/>), presented by Terry Weaver. Existing operation with a processing facility in Denver, PA that has been serving the Massachusetts market (and other Northeast states) since 2011.
- Mass Gypsum Recycling (AKA Patriot Recycling), presented by Chris Carney. Existing operation in Raynham, MA, which was granted a general permit in February 2017 to accept clean gypsum wall-board for recycling.

5) Announcements/Updates

- During the gypsum recycling discussion, MassDEP provided an update on the 2019 Recycling Business Development Grant (RDG) Program, which this year includes clean gypsum wallboard as a target material. Aggregation projects will not be excluded, but preference will be given to beneficiation (e.g. processing and recycling) operations. For more information, please contact Josh Cook at joshua.cook@mass.gov.
- Bill Turley of the national Construction & Demolition Recycling Association (CDRA) provided an update on national issues of interest to the C&D industry, which included:
 - EPA/America Recycles Day (CDRA is participating in planning this event)
 - Legislative Roadmap (under development at CDRA; due out later this year)

SWAC C&D Subcommittee Meeting
MassDEP – Bureau of Air & Waste
June 18, 2019; 10:00 AM to 12:00 PM

- C&D Fines/Biochar (process improvement that might make C&D fines more reusable)
- ConExpo-ConnAgg (big equipment expo in which CDRA will participate)
- SWEEP (Solid Waste Environmental Excellence Protocol): Bill invited interested parties to comment on the ballot draft of the local government standard. Bill offered to provide a copy of the ballot draft if interested. You can contact Bill at turley@cdrecycling.org.)

6) Closing/Next Steps

Next meeting of the C&D Subcommittee: October 30, 2019

Respectfully,

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